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TITLE: LIQUID CRYSTAL PANEL

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ABSTRACT:

PURPOSE: To obtain a brighter screen to widen a useable temperature range by making a black matrix of a material which has a high reflection factor.

CONSTITUTION: The black matrix is formed by using the material which the high reflection factor like aluminum. Namely, the side of a thin film transistor(TFT) 97 for suppressing irregular reflection in liquid crystal 99 is made of black chromium oxide 921 and the light incidence side is made of aluminum 922 which is high in reflection factor. Consequently, even when a liquid crystal panel is irradiated with intense light, the light is reflected by the aluminum 922 to protect the TFT 97 and the irregular reflection in the liquid crystal is absorbed by the chromium oxide 921 to prevent the contrast from decreasing owing to a light leak between picture elements. Namely, the light is not absorbed at the black matrix part and intense light is reflected, so a temperature rise can be suppressed considerably.

Consequently, the liquid
crystal 99 hardly rises to the temperature at which it comes to
liquid, to
brighter screen is obtained, and the usable temperature range can
be widened.

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